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## NOTICE OF ALLOWANCE AND FEE(S) DUE

2352 7590 04/01/2009

OSTROLENK FABER GERB & SOFFEN  
1180 AVENUE OF THE AMERICAS  
NEW YORK, NY 100368403

EXAMINER

PARK, JUNG H

ART UNIT

PAPER NUMBER

2419

DATE MAILED: 04/01/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,829

10/23/2003

Takashi Fujimori

P/1912-28

6332

TITLE OF INVENTION: NETWORK CONTROL DEVICE AND CONTROL METHOD AND PROGRAM THEREOF

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	07/01/2009

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
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or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

2352 7590 04/01/2009  
**OSTROLENK FABER GERB & SOFFEN**  
1180 AVENUE OF THE AMERICAS  
NEW YORK, NY 100368403

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,829	10/23/2003	Takashi Fujimori	P/1912-28	6332
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TITLE OF INVENTION: NETWORK CONTROL DEVICE AND CONTROL METHOD AND PROGRAM THEREOF

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nonprovisional	NO	\$1510	\$300	\$0	\$1810	07/01/2009
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EXAMINER	ART UNIT	CLASS-SUBCLASS
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PARK, JUNG H	2419	370-401000
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1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_
- 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/691,829	10/23/2003	Takashi Fujimori	P/1912-28	6332
2352	7590	04/01/2009	EXAMINER	
OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			PARK, JUNG H	
			ART UNIT	PAPER NUMBER
			2419	
DATE MAILED: 04/01/2009				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 868 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 868 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/691,829	FUJIMORI, TAKASHI	
	<b>Examiner</b>	<b>Art Unit</b>	
	JUNG PARK	2419	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/06/09.
2. ☒ The allowed claim(s) is/are 1, 2, 4, 7, 10, 13-28, 30, 31, 29, 32-34, 36, & 37 and renumbered to 1-29, respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).  
\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                      |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

/Jung Park/  
Examiner, Art Unit 2419

## DETAILED ACTION

### *Reason for Allowance*

1. Claims 1, 2, 4, 7, 10, 13-34, 36, and 37 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Claims 1, 2, and 4 are allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose the following italic limitations:

In claim 1, *each the relay service efficiency promoting section having a service registry provided on the gateway to store information necessary for accessing a service on another sub-network, wherein said service registry shares said information autonomously with another service registry in another network control device belonging to another sub-network by transmitting said information to each other wherein the plurality of sub-networks comprise an information system network, an operation system network, a wireless interconnect and a plurality of lines of portable apparatus interconnects, wherein a plurality of service nodes having a gateway function and a first and a second gateways connected with each other are connected to the information system network, wherein the second gateway and a plurality of service nodes are connected to the operation system network, wherein the first gateway and an additional service node other than the service nodes, are connected to the wireless interconnect, and wherein a plurality of portable apparatuses are connected to the plurality of lines of portable apparatus interconnects* and in combination with other limitations recited as specified in claim 1.

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Claim 7 is allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose the following italic limitations:

In claim 7, *when the relaying is conducted between the sub-networks connected in cascade, the relay service efficiency promoting section includes a message transfer mechanism and wherein the plurality of sub-networks comprise an information system network, an operation system network, a wireless interconnect and a plurality of lines of portable apparatus interconnects, a plurality of service nodes having a gateway function and a first and a second gate-ways gateways connected with each other being connected to the information system network, the second gateway and the plurality of service nodes being connected to the operation system network, the first gateway and an additional service node being connected to the wireless interconnect, and a plurality of portable apparatuses being connected to the plurality of lines of portable apparatus interconnects and in combination with other limitations recited as specified in claim 7.*

Claim 10 is allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose the following italic limitations:

In claim 10, *the relay service efficiency promoting section having a virtual machine as a mechanism for executing a portable code independent of execution environments mounted on the gateway, the virtual machine being operable to load and execute a protocol-dependent portion of a service proxy through the network system, wherein the plurality of sub-networks comprise an information system network, an operation system network, a wireless interconnect and a plurality of lines of portable apparatus interconnects, a plurality of service nodes having a gateway function and a first and a second gateways connected with each other being connected to the*

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*information system network, the second gateway and the plurality of service nodes being connected to the operation system network, the first gateway and an additional service node being connected to the wireless interconnect, and a plurality of portable apparatuses being connected to the plurality of lines of portable apparatus interconnects and in combination with other limitations recited as specified in claim 10.*

Claims 13-16 are allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose the following italic limitations:

In claim 13, *the first, second and third sub-networks mounted with different kinds of protocols/profiles, processing of a physical layer and a data link layer being protocols of the first, second and third sub-networks, and a first gateway/proxy which connects the first and the third sub-networks and a second gateway/proxy which connects the second and the third sub-networks; a common transport layer; and a service proxy and a client proxy both being shared by the first and the third sub-networks and in combination with other limitations recited as specified in claim 13.*

Claims 17-28, 30 and 31 are allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose the following italic limitations:

In claim 17, *the initializing the network system using the relay service efficiency promoting section, in a case where relaying is conducted between the sub-networks connected in cascade the step of initializing including determination of a physical layer*

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*address, determination of a logical address in the sub-networks, activation of a network management service and activation of an applied service using a message transfer mechanism; registering a service to be brought public among services of the sub-networks to another sub-network; utilizing the registered service; and erasing registration of the registered service after the utilization of the service and in combination with other limitations recited as specified in claim 17.*

Claim 29 is allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose the following italic limitations:

*In claim 29, the sending a converted message to a target sub-network using the relay service efficiency promoting section, in a case where relaying is conducted between the sub-networks connected in cascade, by a message forwarding function included in a message transfer mechanism of the relay service efficiency promoting section, wherein the sending of the converted message is accomplished at the time of service linkage between sub-networks not directly connected by a network topology to conduct a service between a service using node and a service providing node on the target sub-network without repeating message conversion and in combination with other limitations recited as specified in claim 29.*

Claim 32 is allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose the following italic limitations:

*In claim 32, ... a function of, upon receiving a registration request acceptance notification from the service registry node, transmitting registry registration information to the service registry node and when other service exists which is to be registered among*



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*services belonging to the node, repeating the same processing to end the registration when the processing is completed* and in combination with other limitations recited as specified in claim 32.

Claim 33 is allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose the following italic limitations:

In claim 33, *the function of notifying the service node as a requesting source that registration of the service is possible to execute registry registration of receiving registry registration information from the service node side and issuing a registration completion notification to the service node side, and a function of, upon completion of registration of all the services to be brought to be public to other sub-network among the sub-networks, transmitting information, out of the contents, to be held in a service registry on other sub-network to the service registry in question to end the processing* and in combination with other limitations recited as specified in claim 33.

Claim 34 is allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose the following italic limitations:

In claim 34, *selecting a service optimum for a purpose among service information of a search result received from the service registry to determine the service and a proxy on the corresponding owned sub-network, issuing a service request to the determined service proxy from the service using node to wait for return of a result of the service thereafter, upon return of a result of the service from the service proxy, referring to the contents to proceed with the processing, and repeating the same processing when*

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*requesting the same service again and ending the processing when the service is not used* and in combination with other limitations recited as specified in claim 34.

Claim 36 is allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose the following italic limitations:

In claim 36, *the function by the user side service proxy of, upon receiving a service request, interpreting the service request and after conducting predetermined message conversion, transferring the message to a provider side service proxy to which a node providing the service in question belongs and monitoring arrival of a service execution result after the transfer, and a function of, upon receiving the service execution result from the provider side service proxy, conducting message conversion to transmit the message to a service proxy designated by the service requesting side node* and in combination with other limitations recited as specified in claim 36.

Claim 37 is allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose the following italic limitations:

In claim 37, *the converting the request into a message system on the owned sub-network and transferring the message to a provider side node, thereafter monitoring arrival of a service execution result from the provider side node, and upon receiving the service execution result, converting the result into a message to transmit the message toward a service proxy designated by the service requesting node* and in combination with other limitations recited as specified in claim 37.

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4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung Park whose telephone number is 571-272-8565. The examiner can normally be reached on Mon-Fri during 6:15-3:40.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jung Park/

Examiner, Art Unit 2419

/Ronald Abelson/

Application/Control Number: 10/691,829

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Primary Examiner, Art Unit 2419